REMARKS

This application has been carefully reviewed in light of the Office Action dated April 11, 2008. Claims 1, 5, and 7-16, and 18 remain in this application. Claim 1 is the independent claim. Claims 1, 8 and 14 have been amended. Claims 2-4, 6 and 17 have been cancelled without prejudice. It is believed that no new matter is involved in the amendments or arguments presented herein.

Reconsideration and entrance of the amendment in the application are respectfully requested.

Art-Based Rejections

Claims 1, 5, and 7-18 were rejected under 35 U.S.C. §103(a) over JP-11-003813 (Kono), in view of U.S. Patent No. 5,518,642 (Inoue).

Applicant respectfully traverses the rejections and submits that the claims herein are patentable in light of the clarifying amendments above and the arguments below.

The Kono Reference

Kono is directed to a ferrite material that mixes NiO and CoO in the fundamental component of an Mn-Zn ferrite. (*See, Kono, Abstract*).

The Inoue Reference

Inoue is directed to a magnetic material having a low magnetic loss when used in a high frequency band. (*See, Inoue, Col. 1, lines 8-10*).

The Claims are Patentable Over the Cited References

The present application is generally directed to a ferrite material. As defined by amended independent Claim 1 a ferrite material includes a sintered body that includes as main constituents, 62 to 68 mol % of Fe_2O_3, 15 to 20 mol % of ZnO, 1.5 to 5 mol %

of NiO, and the balance being substantially MnO. The saturation magnetic flux density thereof at 100°C is 450 mT or more (magnetic field for measurement: 1194 A/m). The minimum core loss value thereof is 1200 kW/m^3 or less (measurement conditions: 100 kHz, 200 mT). The sintered body has a mean grain size of 10 to 30 μm.

The applied references fail to disclose or suggest the above features of the claims of the present invention. In particular, the applied references fails to disclose or suggest "A ferrite material comprising a sintered body comprising as main constituents, 62 to 68 mol % of Fe_2O_3, 15 to 20 mol % of ZnO, 1.5 to 5 mol % of NiO," as required by amended independent Claim 1 of the present invention.

Moreover, the applied references fails to disclose or suggest "the saturation magnetic flux density thereof at 100°C is 450 mT or more (magnetic field for measurement: 1194 A/m)," as required by amended independent Claim 1 of the present invention.

Furthermore, the applied references fail to disclose or suggest "and the minimum core loss value thereof is 1200 kW/m^3 or less (measurement conditions: 100 kHz, 200 mT)," as required by amended independent Claim 1 of the present invention.

Furthermore, the applied references fail to disclose or suggest "wherein said sintered body has a mean grain size of 10 to 30 μm.," as required by amended independent Claim 1 of the present invention.

By way of background and explanation, the present Specification teaches that "The sintering temperature can be selected as appropriate in a range between 1250 and 1450°C. However, in order to fully bring forth the effect of the ferrite material of the present invention, the compacted body is preferably sintered in a range between 1300 and 1400°C." (*See, Specification, page 23, last paragraph to Page 24, first paragraph*). Moreover, the present Specification also discloses that "As shown in FIG. 5, as the sintering temperature increases, the saturation magnetic flux density (Bs) tends to be

improved. On the other hand, as the sintering temperature increases, the core loss (Pcv) tends to increase and the initial permeability (μi) tends to decrease. Accordingly, it is desirable that the sintering temperature is set at 1380°C or lower, and more specifically, in a range between 1300 and 1380°C." (*See, Specification, Page 30, fourth paragraph*).

In contrast to the teachings of the present Application, Kono teaches that sintering temperature is preferably 1100 to 1250 °C and all the examples of Kono employ the sintering temperature of 1150 °C or 1200 °C. (*See, Kono, paragraph [0026]*). Referring to the specific compositions listed in the tables of Kono, which do not fall within the range of the composition defined by the amended independent Claim 1, and the sintering temperature of Kono, which is lower than that employed in the present invention, it is clear that one of ordinary skill in the art would consider the structure of the sintered body required by the claims of the present invention to be different from that of Kono.

Referring to the claims, amended independent Claim 1 of the present invention requires that the sintered body have a mean grain size of 10 to 30 μm. In contrast, the sintered body taught by the examples of Kono Inoue have a mean grain size of 5 μm or less (See tables 9 and 10 of Inoue wherein the sintering temperature of 1200 °C is employed and sintered bodies have a mean grain size of 5 μm or less).

Furthermore, the ferrite material of amended independent Claim 1 requires that the saturation magnetic flux density be at 100°C of 450 mT or more (magnetic field for measurement: 1194 A/m). However, Kono does not disclose nor suggest that the composition defined by the amended independent Claim 1 is effective in obtaining such a high saturation magnetic flux density at 100°C of 450 mT or more.

Furthermore, the ferrite material of amended independent Claim 1 requires that the minimum core loss have a value of 1200 kW/m^3 or less (measurement conditions: 100 kHz, 200 mT), which feature is neither taught nor suggested by Kono.

Accordingly, Kono does not disclose, teach or even suggest the above features of amended independent Claim 1 of the present invention.

The ancillary Inoue reference is not seen to remedy the above noted deficiencies of Kono.

According to amended independent Claim 1 of the present invention, the ferrite material of the amended independent Claim 1 essentially contains 1.5 to 5 mol% of NiO. In contrast, the ferrite material disclosed in Inoue does not necessarily contain NiO, as shown in claim 6 thereof. And although column 6, lines 52 to 55 of Inoue states that "Moreover, addition or containment as impurities of other additives such as TiO_2, CoO, NiO, V_2O_5 and Nb_2O_5 caused no problems insofar as the amount to be added was not too large," there is no specific examples disclosed in Inoue in which contain NiO and the person skilled in the art would not be able to decipher which effects will be obtainable by containing the predetermined amount of NiO.

In addition, table 10 of Inoue shows the measurement results of ferrite material having a composition of Fe_2O_3 : 65 mol%, MnO : 22 mol%, and ZnO : 13 mol%, however, the amount of ZnO does not fall within the ranges required by the amended independent Claim 1.

Similarly, Tables 9 and 10 of Inoue show that mean grain size of sintered body is 5 μm or less, whereas amended independent Claim 1 of the present Application defines that the sintered body has a mean grain size of 10 to 30 μm. Thus, the structure of the sintered body according to the present ferrite material is different from that of Inoue.

Likewise, the ferrite material of amended independent Claim 1 requires that the saturation magnetic flux density be at 100°C of 450 mT or more (magnetic field for

measurement: 1194 A/m). However, Inoue does not disclose nor suggest that the composition defined by the amended independent Claim 1 is effective in obtaining such a high saturation magnetic flux density at 100°C of 450 mT or more.

Since the cited reference fails to disclose, teach or suggest the above features recited in amended independent Claim 1, these references cannot be said to anticipate nor render obvious the invention which is the subject matter of those claims.

Accordingly, amended independent Claim 1 is believed to be in condition for allowance and such allowance is respectfully requested.

The remaining claims depend either directly or indirectly from amended independent Claim 1 and recite additional features of the invention which are neither disclosed nor fairly suggested by the applied references and are therefore also believed to be in condition for allowance and such allowance is respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (310) 785-4721 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: June 23, 2008

By: 
Dariush G. Adli
Registration No. 51,386
Attorney for Applicant(s)

1999 Avenue of the Stars
Suite 1400
Los Angeles, CA 90067
Phone: (310) 785-4600
Fax: (310) 785-4601